

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number
WO 2005/034092 A2

- (51) International Patent Classification⁷: **G11B**
- (21) International Application Number: PCT/US2004/032296
- (22) International Filing Date: 29 September 2004 (29.09.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/507,185 29 September 2003 (29.09.2003) US
- (71) Applicant (for all designated States except US): **HAND-HELD ENTERTAINMENT, INC.** [US/US]; 90 New Montgomery Street, 9th Floor, San Francisco, CA 94105 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HAMILTON, Eric**; 15690 Gum Tree Lane, Los Gatos, CA 95032 (US). **PAGE, Carl**; 5214-F Diamond Heights Blvd. #731, San Francisco, CA 94131 (US). **DOLGOBORODOV, Alexey**; 9 Zaporozhskaya Str. Apt. 88, St.Petersburg 193012 (RU). **TIKHONOV, Anton**; 51 Svetlanovsky Street, Apt. 1, St. Petersburg, 194064 (RU). **SEMENYUK, Vladimir**; 22-1 Kamyshevaya Str. Apt.34, St.Petersburg 197372 (RU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR CODING INFORMATION

(57) Abstract: The invention provides a method and apparatus for coding information that is specially adapted for smaller presentation formats, such as in a hand held video player. The invention addresses, *inter alia*, reducing the complexity of video decoding, implementation of an MP3 decoder using fixed point arithmetic, fast YcbCr to RGB conversion, encapsulation of a video stream and an MP3 audio stream into an AVI file, storing menu navigation and DVD subpicture information on a memory card, synchronization of audio and video streams, encryption of keys that are used for decryption of multimedia data, and very user interface (UI) adaptations for a hand held video player that implements the improved coding invention herein disclosed.



WO 2005/034092 A2